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Federal Department of the Environment, Transport, Energy, and  
Communication DETEC

Federal Office of Civil Aviation FOCA

# Swiss Aviation Safety Conference SASCON '11



26th October 2011  
Kursaal Bern

## Safety Culture Development “Best Practice”

Federal Office of Civil Aviation (FOCA)  
Safety Risk Management  
3003 Bern

# Program

- 08:30**            **Registration**
- 09:00**            **Opening of SASCON '11**  
Dr. P. Müller, Director General of FOCA
- 09:15**            **Why Safety Culture Affects Human Behaviour**  
Prof. Dr. T. Wäfler, FHNW / iafoB GmbH
- 09:45**            **Developing and Measuring a Robust Safety Culture**  
T. L. von Thaden, PhD, University of Illinois, USA
- 10:45*            *Coffee Break*
- 11:15**            **Improving the Safety Culture Through SMS  
Implementation – a Practical Approach**  
A. Härry, SR Technics
- 11:45**            **SMS Implementation with Focus on Safety Culture  
Within a Small but Complex Organization**  
K. Fischer, Kuerzi Avionics AG
- 12:15*            *Lunch Break*
- 13:30**            **Safety Culture Assessment: Practical Application**  
M. Kohler, Great Circle Services AG
- 13:45**            **The Last Slice of the Swiss Cheese**  
P. Fauchère, Air-Glacières SA
- 14:15**            **Transferring the Safety Culture Theory into Practice**  
Ph. Pilloud, easyJet Switzerland
- 14:45*            *Coffee Break*
- 15:15**            **The Relation between Safety Culture, Regulatory  
Activity and Oversight**  
Dr. P. Moreillon, Swiss Aerodrome Association
- 15:30**            **Safety Culture: Facts, Figures and Indicators**  
Th. Romig, Genève Aéroport
- 16:00**            **Summary and Panel Discussion**  
All speakers
- 17:00**            **End of Conference**

# Biography and Abstract of Today's Speakers

## Why Safety Culture Affects Human Behaviour

Prof. Dr. Toni Wäfler, FHNW / iafoB GmbH

### Short Biography

Prof. Dr. Toni Wäfler is a lecturer and researcher at the University of Applied Sciences Northwestern Switzerland (FHNW), School of Applied Psychology (APS), where he established the Institute "Humans in Complex Systems (MikS)". The Institute conducts research projects in the domain of Human Factors, sociotechnical system design, collaborative planning processes, Occupational Health, Safety, and Security.

In 1998 Toni Wäfler was also co-founder of iafoB GmbH a private consulting company in Zurich, Switzerland, where he still is a senior consultant. As a consultant his main topics include organizational and job design in a highly automated work system; with a main focus on process efficiency and reliability as well as on system safety.

### Abstract of the Presentation

Human behavior can provide to a system's safety or it can hamper it. However, human behavior is influenced by many factors. Aspects of the person on the one hand – his or her personality, skills and knowledge – are only partly determining human behavior. Characteristics of the organization on the other hand also have a huge impact on human behavior. Safety culture is one of these characteristics. Safety culture influences people's attitudes and motivation as well as their perception (of risk) or what they consider to be normal. In the presentation psychological concepts of safety culture and of its impact on human behavior will be presented.

## Developing and Measuring a Robust Safety Culture

Terry L. von Thaden, PhD, University of Illinois, USA

### Short Biography

Terry von Thaden is a professor in information science, human factors and aviation at the University of Illinois at Urbana-Champaign with affiliate appointments in Industrial and Enterprise Systems Engineering and Psychology. Her work investigates human and cultural factors affecting risk, decision, and performance in high-consequence, high-reliability industries including aviation and other transportation systems, security, and medicine. She has developed tools and methods used to benchmark over 200 organizations in these industries.

In 2010 she founded Illumia Corporation, a safety consultancy company, and home to the SCISMS, the Safety Culture Indicator assessment tool she developed under research awards from the Federal Aviation Administration and the Airforce Office of Scientific Research. Dr. von Thaden holds professional certification in Aviation Safety, Accident Investigation, and Safety Management. She is a pilot and motorcyclist.

## **Abstract of the Presentation**

Safety – aviation safety, nuclear safety, drilling safety, medical safety, product safety, workplace safety – is in the news everywhere. In the 21st century, safety is a critical strategic issue for organizations and institutions, public and private, large and small. As organizations become more intertwined, more dynamic, more virtual, and more global, approaches to safety must expand to encompass new realities and opportunities. Developing and measuring a robust, informed safety culture allows organizations to engage their human capital in the process of continual improvement related to quality, productivity, and above all safety. While aviation organizations may not be able to entirely reduce their exposure to risk, through developing a positive, proactive safety culture they may reduce or avoid altogether negative outcomes associated with adverse events.

This presentation will provide insights and strategies for understanding and grappling with safety culture issues across and within organizations. The focus will be on practical applications and emerging research in measuring and assessing safety culture; information dimensions of safety; and cross-industry, cross-organizational benchmarking of safety performance.

## **Improving the Safety Culture Through SMS Implementation – a Practical Approach**

Antonio Härry, SR Technics

### **Short Biography**

Antonio Härry is a mechanical engineer by trade and holds an engineering degree from ZHAW School of Engineering. He began his career in 1980 at Jet Aviation in Basel working as Project Engineer for completions. Between 1982 and 2001 he worked for Crossair Technics and Swissair / SR Technics.

At Crossair Technics he was part of the team establishing the technical organization initially in Zurich, and then in Basel. He then became the head of the aircraft maintenance department at Crossair developing it to a full size maintenance organization with two main bases and three line stations. At Swissair Technics he began working in the aircraft overhaul division, later maintenance planning and then moved into the flight safety division.

Between 2001 and 2006 he spent five years as Head of the Quality Assurance at Contraves Space (RUAG Space). Antonio went on to become Vice President of the Quality Assurance and Flight Safety for RUAG Aviation in Emmen, where he introduced a proactive and risk based Quality and Safety Management organization including the Safety Management System (SMS). In late 2009 he became Vice President of Business Unite Products at RUAG Aviation in Emmen and Oberpfaffenhofen (Munich), where one of his responsibilities was the successful re-launch and certification of the Dornier 228 New Generation aircraft.

In January 2011 he re-joined SR Technics Switzerland in Zurich as Vice President Group Quality and Safety.

### **Abstract of the Presentation**

Today's business environment requires fast changes of the MRO world. Additional factors like cost control demands flexibility and innovation from each employee. Organizational needs, processes and employees attitude towards the company and towards the work perceptions is changing.

In order to succeed with all that changes in rather short time, a strong change management process must be in place. At any stage of the change process the safety must always be and remain the first priority.

With a systematic implementation of Safety Management Tools, SR Technics ensures at all times a high level of safety. Without inventing any new tools we drive towards the just culture applying risk management at all aspect of work. An open communication, an efficient reporting and feedback system are key aspects for our safety vision.

Enabler for the vision is the STOP campaign allowing each employee to interrupt his work when safety issues are jeopardized. This includes flight safety relevant issues as well as occupational and environmental safety issues. To enforce this safety culture, a Safety-Charta has been written and signed by all stakeholders based on trust and respect for each other.

## **SMS Implementation with Focus on Safety Culture Within a Small but Complex Organization**

Karsten Fischer, Kuerzi Avionics AG

### **Short Biography**

Karsten Fischer is a Graduate Engineer who studied Aircraft Engineering in Hamburg. He is Founder and Managing Partner of ddpConcepts GmbH which offers a broad range of products and services for the aviation industry. He worked several years for Pilatus Aircraft Ltd. During this time, he worked within the Structural Engineering Department on the Business and Transport Aircraft PC-12, as Head of Configuration Management and within the Office of Airworthiness. For Schindler Elevator Limited he worked as a PLM Project Engineer. Since 2005 Karsten Fischer is a course instructor for TÜV Nord Akademie for different aviation industry courses.

In 2010 he was appointed as Quality Manager of the Kuerzi Avionics AG, which covers the Safety Manager responsibilities too.

### **Abstract of the Presentation**

Kuerzi Avionics AG as a small approved Part 21 Design Organisation, Part 21 Production Organisation and Part 145 Maintenance Organisation is implementing an overall Safety Management System (SMS).

The Kuerzi SMS is based on the Industry Aviation, Space and Defence Quality Management System Standard EN 9100:2009, where the relevant SMS requirements have been integrated with the aim to cover the DO, PO and MO and its interfaces without gaps in between.

The presentation illustrates in the introduction briefly the way to the integrated Management System. The main part is focussed on the general Safety Culture Principles found useful and practical for the Kuerzi Business and gives several practical examples of specific elements supporting the Kuerzi Safety Culture.

## **Safety Culture Assessment: Practical Application**

Markus Kohler, Great Circle Services AG

### **Short Biography**

Markus Kohler is Deputy Managing Director of Great Circle Services AG in Horw/Luzern ([www.gcs-safety.com](http://www.gcs-safety.com)). Markus is a graduate of Embry-Riddle Aeronautical University in Daytona Beach, Florida with a degree in Aircraft Engineering and holds an Executive MBA. He is a certified A&P aircraft mechanic and holds a commercial pilot license. His work experience ranges from working as a technician on float planes in Alaska to Reliability, Maintainability and Safety (RMS) Engineering for Pilatus Aircraft Ltd.

His previous and current positions include Air Safety Investigator, Continuing Airworthiness Manager, Airworthiness Review Staff, auditor (FOCA and IS-BAO accredited) as well as trainer on all of the above subjects.

### **Abstract of the Presentation**

The core of the presentation is a review of existing Safety Culture assessment methodologies and tools, and a discussion of their validity and limitations, with particular distinction between large and small organizations.

Safety Culture is a very abstract concept which is not easy to grasp for practitioners in a highly technical industry like aviation. The presentation addresses the resulting necessity of knowledge transfer from the social sciences to the industry, and provides a brief overview of the Safety Culture construct from an organization psychology point of view.

The presentation discusses the necessity for an assessment of the Safety Culture in aviation, both for the regulator (performance-based requirement) as well as for the aviation organizations (e.g. knowing status-quo, identifying areas for improvement to ensure efficient allocation of resources, and assessing effectiveness of improvement measures). Reference is made to the Safety Culture requirements in the context of the current ICAO SARPs and EASA Regulations (including upcoming regulation and associated guidance material).

The presentation concludes that Safety Culture can be evaluated through a formalized (repeatable and assessor-independent) process with sufficient statistical and qualitative validity to render the result reliable. However, the limitations of the tools must be clearly understood and considered. Factors which affect the interpretation of the results (e.g. how an organization manages uncertainty) will be presented and discussed.

## **The Last Slice of the Swiss Cheese**

Patrick Fauchère, Air-Glaciers SA

### **Short Biography**

Patrick Fauchère is a helicopter pilot with 9,500hrs flown, exclusively in the Swiss Alps and Himalayas. In his career, he has done over 2,700 rescue missions. He is the Flight Safety Officer and Deputy Chief Pilot of Air-Glaciers. He is also the Swiss delegate of the EHA (European Helicopter Association) where he is the chairman of the Aerial Work Group and the expert of the EASA Aerial Work review group. Patrick Fauchère is the Swiss delegate of the EHEST-EHSAT (European Helicopter Safety Team), president of the Air Rescue Commission of the ICAR (International Committee for Alpine Rescue) and a member of the Swiss LAE working group (Lastaufnahmeeinrichtungen).

### **Abstract of the Presentation**

Following a loss of tail rotor effectiveness, the pilot did a great job and managed to land safely. The analysis of the causes revealed a deep impact of the human factors chain. The intention of the presentation is to share Air-Glaciers experience and to show how a well developed safety culture facilitates the prevention of similar incidents. The presentation illustrates how different parties effectively worked together in order to analyse the root causes of the incident and to implement effective measures.

## **Transferring the Safety Culture Theory into Practice**

Philippe Pilloud, easyJet Switzerland

### **Short Biography**

Philippe Pilloud is the Head of Operations Risk Management at easyJet Switzerland. He is an A320-Captain with 8000 flight hours mainly done on Airbus A320 and Boeing B737. Apart from that, he works as flight instructor on light aircrafts. Capt. Philippe Pilloud does have a Master in Air Transport Management from the City University London with a focus on Air Safety. He also acts as an Air Accident Investigator for Cranfield University in England and teaches at the French Aviation University ENAC in Toulouse.

### **Abstract of the Presentation**

The presentation focuses on how the safety culture theory can be translated into practice. The importance of a clear definition of just culture and the culpability test will be discussed. In addition, the presentation looks at further important concepts like reporting culture, learning culture and company culture.

## **The Relation between Safety Culture, Regulatory Activity and Oversight**

Dr. Pierre Moreillon, Swiss Aerodrome Association

### **Short Biography**

Dr. Pierre Moreillon is a Doctor of Law of the University of Lausanne. His dissertation dealt with restrictions to the creation and operation of airfields. He is an attorney with focus on Economics and Aeronautics at the Law firm Marmier, Moreillon, de Luze, Fox, Schnitzler & Pezuela in Lausanne. Dr. Moreillon is Secretary General and co-founder of the Swiss Aerodromes Association and deputy Secretary General of the European Regional Aerodromes Community (ERAC). He is also member of the Safety Standards Consultative Committee (SSCC) of EASA, member of the Board of Directors at Skyguide SA. Dr. Moreillon is Honorary President of AEROSUISSE, the umbrella organization of the Swiss Civil Aviation, former long time member of the Federal Aeronautical Commission and former Secretary of the Swiss Air & Space Law Association (ASDA). He also held a private pilot license from 1977 to 2009.

## **Abstract of the Presentation**

Can safety culture and best practices be successfully implemented without an active participation of the State? What could/should this participation be? What is the potential of improvement of the State's role in this respect?

## **Safety Culture: Facts, Figures and Indicators** Thomas Romig, Aéroport International de Genève

### **Short Biography**

Thomas Romig is a graduate of Embry Riddle Aeronautical University where he obtained an Aviation Business Management degree. After four years with Airports Council International (ACI World) where his responsibilities included development of policies, recommended practices, guidelines and strategies for Operational Safety, Airport IT and Air Cargo, Thomas took up the position of Safety Officer at Geneva International Airport where he is currently in charge of the airport Safety Office and all safety and risk management activities.

In his current position at Geneva Airport, he is responsible for the Aerodrome Certification Process, the development and management of the Safety Management System, employee Health and Safety, infrastructure Safety (fire code) and Enterprise Risk Management. He currently manages a team of four people working on these various domains.

Thomas has kept a strong link with ACI for whom he teaches a Safety Management course as part of the International Airport Professional training program; participates as an active member of the ACI Operational Safety Subcommittee and is a regular speaker at ACI Fund Safety Seminars. Thomas is also involved in regulatory affairs through the EASA Rule Making Group, ADR.001 as well as a member of the ICAO Pans Aerodromes Study Group where he represents ACI and is actively involved in the development of Chapter 5, Airport Operations. He recently earned his ICAO / ACI International Airport Professional accreditation.

### **Abstract of the Presentation**

The effective implementation of a safety management system within an organization requires a change in culture. The presentation will include a study of the changes in the organizational safety culture at Geneva Airport through the implementation of the SMS including a safety culture survey and various ways in which safety culture can be measured.